

Children's Health Protection Advisory Committee

FACA Members:

Melanie A. Marty, Ph.D., Chair
Cal/EPA, Office of Environmental Health
Hazard Assessment
1515 Clay St. 16th Floor
Oakland CA 94612
(510) 622-3154

Laura Anderko, RN, Ph.D.

Henry Anderson, M.D.

John Balbus, M.D., MPH

Sophie Balk, M.D.

Ms. Beatriz Barraza-Roppe

Ms. Claire Barnett

Mr. Angelo Bellomo

David Carpenter, M.D.

Ms. Shelly Davis, Esq.

Mark Dickie, Ph.D.

Maureen Edwards, M.D. MPH

Natalie Freeman, M.D., Ph.D.

Howard Frumkin, M.D., Ph.D.

Gary Ginsburg, Ph.D.

Daniel A. Goldstein, M.D.

Mr. Richard J. Hackman

Woodie Kessel, M.D.

Mr. Robert Leidich

Janet Mostowy, Ph.D.

William Sanders, Dr.P.H.

Anne Turner-Henson, RN, DSN

Ms. Susan West Marmagas

Charles Yarborough, M.D., MPH

July 25, 2007

Administrator Stephen Johnson
U.S. Environmental Protection Agency
1200 Pennsylvania Ave NW
Washington D.C.

Subject: Review of the Research Translation of the EPA/NIEHS
Children's Centers: Accomplishments and Opportunities for the Future

Dear Administrator Johnson:

The year 2008 marks the tenth year of the EPA/National Institute of Environmental Health Sciences (NIEHS) Children's Environmental Health and Disease Prevention Research Centers Program (Centers Program). Consequently, it is prudent to review the program and its effectiveness in translating research results into public health policy, and make recommendations for the future. EPA established a Workgroup comprised of members of the Children's Health Protection Advisory Committee (CHPAC) and the Board of Scientific Counselors (BOSC) to assess the ability of the Centers Program to translate their research findings in a manner useful to public decision making. After review of the Workgroup's Findings Document (see attached) the CHPAC is pleased to offer its own observations and recommendations regarding the Centers Program.

CHPAC Observations

The CHPAC has concluded that the Centers program represents an excellent investment that provides both short and long-term benefits to children's health consistent with EPA's mission:

- The Centers Program has been instrumental in initiating/conducting research that provides a basic science foundation for improving children's health and development, and frequently assisting in translating that research into changes in policy and practice in community and workplace settings to improve public health;
- The translation of research in ways that is geared for community-based organizations, health professionals, policy makers and the public-at-large is a cornerstone of public health research;
- The use of Community-Based Participatory Research (CBPR) strategies have substantially enhanced the effectiveness of research, including its scope and utility for rapid translation into policy and practice; and

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- The Centers have created a body of literature that would not otherwise exist and that is difficult to create with individual research grants. The Centers-based approach has provided substantive contributions to literature in the basic sciences, social sciences, CBPR, and other areas. Additionally, the Centers have generated lay literature for use by the public and that may be useful in the development of policy. The publications of each Center are available via the EPA Children's Environmental Health Centers Web site at: <http://es.epa.gov/ncer/childrenscenters/>

CHPAC Recommendations

- 1) The Centers Program should be sustained using the key elements of a Centers-based approach, CBPR, and a Community Outreach and Translation Core;**
- 2) EPA should increase the amount of funding, including identifying partners to leverage funding streams, devoted to the Centers Program to reach more child-specific settings and communities, and investigate more children's environmental health issues;**
- 3) Provide targeted supplemental funding for programmatic enhancements including:**
 - a) Promoting mentoring among Centers in the area of CBPR, clinical translation, risk communication and policy change;
 - b) Supporting a rigorous evaluation component that will enable the assessment of impact on the communities, and track input into policy or changes in public health prevention practices;
 - c) Evaluating health professional outreach to assess both changes in knowledge, attitudes and behaviors of health professionals and changes in clinical practice; and
 - d) Encouraging Centers to partner with Pediatric Environmental Health Specialty Unit (PEHSUs) and with pediatric and family health providers to: 1) help researchers become aware of the array of environmental health issues impacting the development of children which need further research; and 2) assist in translating basic research into applied prevention and intervention methods in clinical practice.
- 4) In addition, the following enhancements would better enable the Centers to meet one of the Program goals – promoting translation of basic research findings into applied intervention and prevention methods – to provide greater public health impact:**
 - a) **Explore Additional Partnerships**
 - The partnership with NIEHS has been beneficial and additional partnerships with other agencies, such as the Centers for Disease Control (CDC), the range of institutes that are part of the National Institutes for Health, the Department of Housing and Urban Development, the Defense Advance Research Projects Administration (e.g., for monitoring applications), and others, could enhance not only funding but translation of research into public health policy and practice to benefit children. The EPA is encouraged to leverage existing services in other agencies and pool available resources (e.g., biomonitoring that occurs through CDC) in order to maximize efficiency and avoid duplication.

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- b) Broaden Representation on Advisory Boards
 - Advisory boards should be comprised of a diverse set of stakeholders including not only community leaders, parents, health professionals, and non-governmental organizations, but also federal, state, and local agencies, whenever possible.
- c) Improve and Document Effective Risk Communication Strategies
 - At the program's annual Centers' meetings, ensure sufficient time for Centers to discuss lessons learned in risk communication;
 - Create incentives for Centers to evaluate the effectiveness of their risk communication techniques leading to prevention and intervention; and
 - Document lessons learned, contribute to the literature on risk communication principles, and provide opportunities to publish.
- d) Link Centers with Other Outreach Entities
 - Assist Centers in outreach efforts, such as connecting Centers to existing organizations and networks that have created effective outreach tools (e.g. to the grantees of EPA's "Building Health Professionals Capacity to Address Children's Environmental Health" Grant Program).
- e) Translation and Integration
 - Encourage the development of processes that capitalize on and integrate lessons learned and best practices from the Centers into future epidemiological studies such as the National Children's Study.
- f) Broaden Role of Center Researchers
 - Encourage Center researchers to participate in public health decision making. The role of scientists in public health includes considering how data can be used by policymakers, community-based organizations, public interest advocates, and industry and conveying the science to them objectively in the context of policy discussions.
- g) EPA Support for Academic Researchers
 - Develop symposia for academic researchers to present Center work, CBPR-based research, and the results of Center research translation.

Additional Rationale for Maintaining Centers Program

The unique value of the various research centers in the Centers Program is that they provide a range of opportunities for the translation of research findings into practice and policy that are otherwise much more difficult to achieve through the efforts of individual researchers alone. Following are a number of specific attributes of a Centers-based approach to children's health research that make this approach even more valuable for public decision-making efforts.

- Opportunity for Integration: The case studies generated by the Center investigators for the joint CHPAC/BOSC Workgroup deliberations demonstrated that integration occurs

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on a number of dimensions, including integration of basic science with real community concerns and environmental problems, and integration of research and outreach. Effective translation was facilitated by the: a) utilization of the "cores," which make a major difference in terms of scientists' abilities to maintain cohorts, develop community trust, and to quickly move into areas of new research as additional issues arise; and b) utilization of a CBPR approach.

- Continuity: The Centers approach allows one to accomplish objectives over a sustained period of time, which is needed for translation success. Moreover, provision of stable sustained funding for these Centers will provide an environment conducive to the development of the next generation of researchers in children's environmental health.
- Ability to Foster Trust: Centers are able to build effective relationships and lasting partnerships between researchers, decision-makers, industry partners, and communities, and demonstrate an ethic of giving back to the community through outreach programs, in addition to conducting basic research.
- Multi-disciplinary Teamwork Enhances Research: The Centers have also served as resources to the community, as well as to academia and industry partners, affording a way for multi-disciplinary teams to work effectively together on children's environmental health problems.
- Training of Existing and Future Researchers and Health Professionals: There exists a current cohort of researchers and health professionals of all types who are unaware of the advances made by the Centers. The program offers opportunities to the next generation of researchers and healthcare professionals who are interested in CBPR research with a focus on translating findings into practice (students doing thesis work in Centers, minority students doing research, graduate students becoming integrated into the community, etc.).

Future Considerations

The Center-based approach, using CBPR, is well positioned to assist EPA and the broader society in addressing key emerging scientific challenges and opportunities relevant to children's health. Such opportunities might include (but not be limited to):

- Incorporating biological markers and susceptibility (e.g., genetic) data into risk assessment;
- The role of the built environment in settings where children live, learn, and play, and of chemicals in modifying metabolic processes;
- The impact of complex chemical exposures on developmental responses, including immune, neurological, and other systems; and
- Direct and indirect impacts of global warming on children's health outcomes.

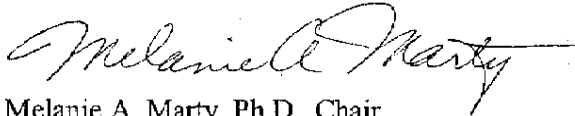
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In conclusion, based on the Workgroup findings and scientific opportunities that greatly benefit from a Centers-based approach, we strongly urge you to continue funding the Centers Program, and to consider supplemental funding to capitalize on the translational activities of these Centers. We thank you for considering these recommendations, and would be happy to discuss them with you or your designee.

Sincerely,



Melanie A. Marty, Ph.D., Chair
Children's Health Protection Advisory Committee

Cc:

George M. Gray, Ph.D., Assistant Administrator for Research and Development, EPA
Office of Research and Development
Kevin Y. Teichman, Ph.D., Acting Deputy Assistant Administrator for Science, EPA
Office of Research and Development
William H. Sanders, III, Dr.P.H., Acting Director, Office of Children's Health Protection
and Environmental Information
Hugh Tilson, Ph.D., Human Health National Program Director, EPA Office of Research
and Development
Gary J. Foley, Ph.D., Director, National Center for Environmental Research, EPA Office
of Research and Development
David A. Schwartz, M.D., Director, National Institute of Environmental Health Sciences

Attachments:

"CHPAC-BOSC Workgroup Review of the Research Translation of the EPA / NIEHS Children's
Research Centers: Accomplishments and Opportunities for the Future"